COUNTY OF LOS ANGELES
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July 10, 2012

TO: Each Supervisor

FROM: Jonathan E. Fielding, M.D., M.P.H. JE Fielding MD
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SUBJECT: **HIGH DESERT MORTALITY RATES AND COMMUNITY HEALTH NEEDS**

This is in response to the May 29, 2012 Board motion directing the Department of Public Health (DPH) to work with the Departments of Health Services (DHS) and Mental Health (DMH) to report back on 1) a comparative assessment of mortality rates in the High Desert and the rest of the county, and 2) the actions being taken, and planned to be taken, to address the community's health care needs.

I. Overview

The High Desert, also referred to as the Antelope Valley (AV) and Service Planning Area 1 (SPA 1), is a geographically isolated, mostly rural community that has been undergoing rapid demographic change. SPA 1 comprises the largest geographic area but smallest population size of any of Los Angeles County's (LAC) eight SPAs. It is spread over an expansive 1,521 square miles, with the majority of the region being sparsely populated, comprising less than 4% of the total county population. The population density is only 241 residents/ sq.mi, compared to a population density of 14,769 residents/sq.mi in the most densely populated area, SPA 6 (South), and an average of 2,550 residents/sq.mi for LAC overall.[1]

Although the region remains largely rural, the size of the population in SPA 1 has increased by over 50% during the past two decades, from approximately 247,000 residents in 1990, to 385,000 in 2010. In addition, the racial and ethnic composition of SPA 1 has changed dramatically, shifting from a predominately non-Hispanic (NH) white population (71% NH white, 7% NH African American, 3% Asian/Pacific Islander, 18% Hispanic)[1] to a more diversified population (43% NH white, 14% NH African American, 4% Asian/Pacific Islander, 38% Hispanic)[1].

Finally, the socioeconomic conditions in SPA 1 have also changed, with the percent of the population living in poverty increasing markedly from 1990 to 2010. SPA 1, which had one of the lowest rates of poverty among all SPAs in 1990, now has the third highest rate of poverty, with over 40% of the population living below 200% of the Federal Poverty Level (FPL), compared to only 27% living below 200% FPL in 1990.

The large size of this sparsely populated geographic region, combined with recent and rapid demographic changes and high levels of poverty, present unique and significant challenges in addressing the health and health care needs of the AV population.

II. Comparative Health Assessment

A. Mortality rates

Of the 57,620 deaths in Los Angeles County in 2009, 2,230 (3.9%) were residents of the Antelope Valley Service Planning Area (SPA 1).

From 2000 through 2009, the overall death rate in LAC decreased 22%, from 749 to 583 deaths per 100,000 population. During the same period, the death rate in SPA 1 decreased 6%, from 863 to 815 deaths per 100,000 population, after peaking in 2003 at 921 deaths per 100,000. For some causes of death including emphysema, diabetes, and Alzheimer's disease, the death rate in SPA 1 was higher than the county rate and higher than that of other SPAs, but was not higher for other key causes of death.

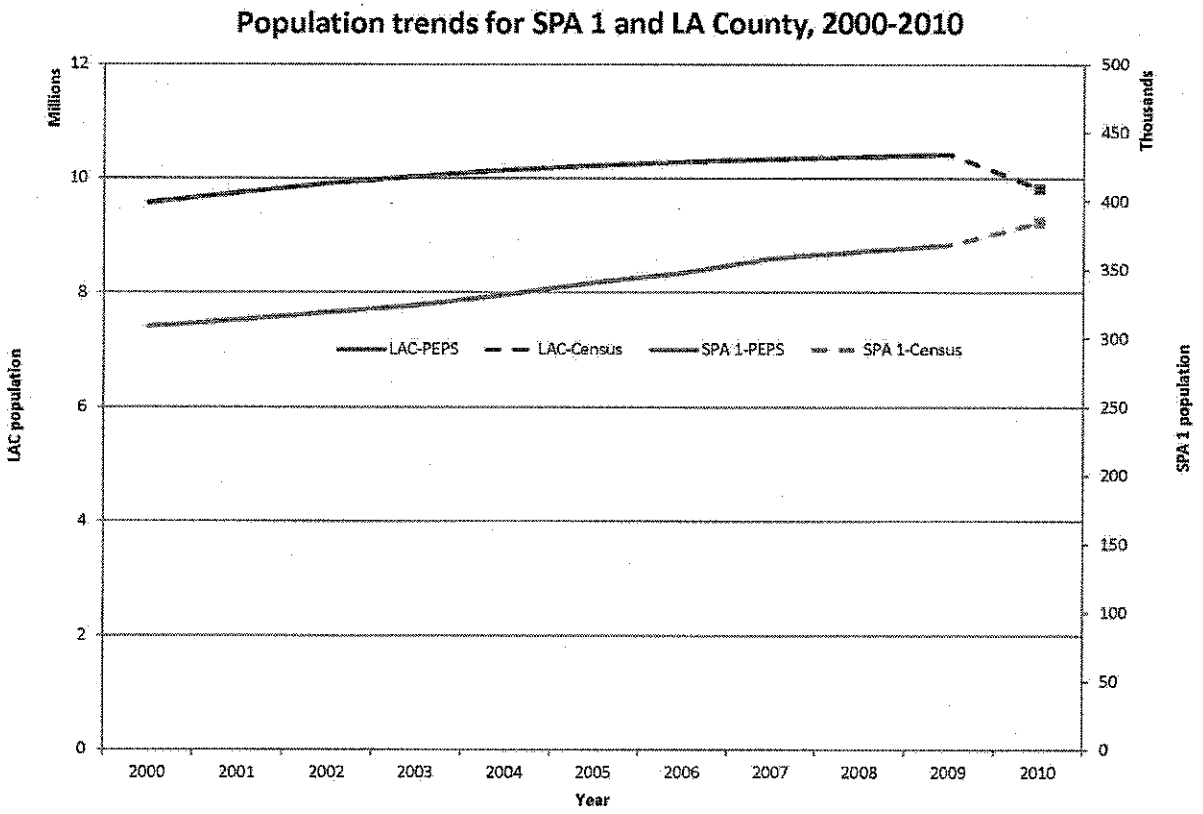
The death rate among African Americans in SPA 1 was 1,215 per 100,000, which was similar to the death rate among African Americans in San Fernando (965/100,000) and East (1,086/100,000) SPAs, and whites (1,168/100,000) in South SPA.

B. Findings related to population estimates

In order to calculate mortality rates, accurate estimates of population size for the county and for each SPA are required. U.S. Census counts, which are considered to be the 'gold standard', are used when they become available decennially, but for intercensal years, we rely on yearly population estimates contracted through the County's Urban Research unit.[1] Estimating population size becomes increasingly error prone the further into the decade. Creating population projections is even more difficult for regions such as the AV, which has been undergoing rapid socio-demographic change.

New data from the 2010 Census[3] indicates that population growth in the AV may have been greater than was reflected in the county PEPS population estimates. Population estimates for 2000-2009 for SPA 1 reflect annual increases ranging from 1.5% to 3.0%. However, the 2010 Census count for SPA 1 was *4.5% higher* than the 2009 PEPS estimate, suggesting that the estimates during the preceding decade may have underestimated the true population in SPA 1. For LAC overall, annual population estimates increased from 0.4% to 1.8% each year from 2000-2009. The 2010 Census count for the county was *5.7% lower* than the estimate for 2009, suggesting that the county population during the preceding decade may have been overstated (see Figure). This information indicates that:

1. The estimated rates of death in the AV are likely overestimated, i.e. the actual rates of disease are lower than published estimates, while
2. The death rates for LAC are underestimates, i.e. the actual rates are higher than published estimates. These facts suggest that the apparent disparities between the AV and LAC are less than initially estimated.



C. *Contributors to higher mortality rates in the AV*

Although the geographic disparities in mortality rates may be less than initially estimated, the AV experiences higher rates of mortality than LAC for some leading causes of death, as well as has a higher prevalence of underlying risk factors that lead to higher disease rates. Two of the most important contributors to this higher mortality are cigarette smoking and obesity. SPA 1 has the highest prevalence of cigarette smoking (20.4%) of any SPA, and the second highest prevalence of obesity (28.0%). Smoking is the leading cause of preventable death[4,5] and contributes to the high rates of death from each of the top three leading causes of death in SPA 1: Coronary Heart Disease, Emphysema, and Lung Cancer. Obesity/physical inactivity is the second leading cause of preventable death[4,5] and contributes to the high rates of death from Coronary Heart Disease (CHD), as well as diabetes and stroke, which are the fourth and fifth leading causes of death in SPA 1. (see attached Table 1)

These health needs are compounded by the high rate of poverty in the AV. Community socioeconomic conditions are strongly related to the health of individuals and their communities. Social and economic factors are likely the single most important driver of health outcomes and longevity,[6,7] and have important effects on health behaviors, contributing to the higher rates of smoking, obesity, and many other health risks and outcomes in the AV. For example, 25% of SPA 1 residents who live at or above 300% FPL are obese, compared to 33% of those below 100% FPL. Similarly, while 60% of SPA 1 residents living above 300% FPL are meeting recommended guidelines for physical activity, only 44% of those below 100% FPL are meeting these guidelines.

III. Current and Planned Action to Address the AV's Health Care Needs

The location of existing DHS, DPH, DMH, and Community Partners facilities are shown in the attached Map 1.

A. Current and planned DPH actions addressing higher mortality rates and other health needs in the AV

DPH is actively engaged in the following activities to address the leading causes of death and premature death in the AV region:

1. Coronary Heart Disease (CHD), Diabetes, and Stroke

- *Steps for Health*: Steps for Health is a collaborative between DPH, Antelope Valley Partners in Health (AVPH) and Antelope Valley Community Clinic (AVCC) with the goal to develop a program to assist AVCC clients, their families and friends to increase physical activity to 30 minutes daily primarily via walking groups as well as yoga classes and other forms of exercise. Steps for Health specifically targets diabetic patients at AVCC and will ultimately be extended to include other chronic diseases. Under this project, participants will be able to join a walking group will begin with a five minute talk emphasizing healthy food choices.

- *Healthy Eating and Active Living Zone*: DPH is a partner in the Healthy Eating and Active Living (HEAL) Zone, a Kaiser grant received by AVPH. HEAL Zone targets schools in a low income, high morbidity area of AV and strives to provide consistent messaging in the school cafeteria, classroom, after-school care programs and at home to children regarding healthy eating and physical activity.

- *AV Cook Off:* Developed by DPH, the AV Cook Off partners with AVPH, the LA County Parks and Recreation, Women, Infants, and Children (WIC) dieticians, the Palmdale School District Head Start and the University of AV to educate youth and their families on nutrition and healthy eating. The Cook Off is a annual summertime three-day event: on the first day youth receive education in five parks across AV on healthy foods and food safety; on the second day there is a competition where the kids make a lunch and snack that is judged on how nutrition, taste and presentation. The finalists from each of the five parks come together on the final day and compete once again.

- *City of Lancaster Master Bike Plan*: DPH awarded funds to the City of Lancaster to develop a master plan of bike trails.

- Nursing staff conduct presentations on nutrition using standardized DPH Speaker's Bureau presentations.

- DPH intends to further address CHD and diabetes via mass media outreaches through partnerships with AV cities and AVPH. Discussions will be underway soon.

2. Emphysema/COPD and Lung Cancer

- *AV Fresh Air Coalition*: DPH is working with the AV Fresh Air Coalition, headed by Pueblo y Salud and funded through the DPH Tobacco Control Program, to develop policies to reduce smoking rates by making the cities Palmdale and Lancaster smoke free.

- *AV Asthma Task Force*: DPH has partnered with AVPH on the AV Asthma Task Force addressing the high rates of Asthma in the AV. The Task Force is currently working on a pilot patient navigator program that would help kids who are identified with asthma in AV schools develop an appropriate asthma management plan.

3. Motor Vehicle Accidents (MVA)

- *MVA Taskforce*: MVAs are the second leading cause of premature death in the AV. To address this issue, in 2008, a taskforce was established which convened quarterly and included the following entities: DPH, Sheriff, CHP, local driving education schools, Emergency Department physicians, city representatives and other interested parties. In 2004, the ratio of MVA deaths in AV compared to LAC was 4:1 in 2004; however, in 2010, following the implementation of many MVA Task Force activities and interventions, the rate dropped to 2:1. This lower rate is more consistent with MVA disparities seen when comparing urban areas to rural. The Taskforce has been on hold since 2011 due to the recent drop in the MVA rate.

4. Activities to Addressing Health Inequities

- *AV STD Task Force*: In 2009, the AV had the second highest rate of Chlamydia infection overall and tied with South Los Angeles/SPA 6 for the highest rate of Chlamydia infection among African Americans in all LAC. DPH convened the Antelope Valley Sexually Transmitted Disease (STD) Task Force to raise awareness and mobilize community resources to address this rising epidemic. Since 2009, the Task Force has met quarterly and has implemented a multi-pronged approach to address this issue, including community outreach and education to local area physicians, schools, and community-based organizations (CBO). Specific interventions have included the following: the development and school-board approval of a sex education and STD prevention curriculum for AV high schools; outreach to local providers diagnosing a high volume of Chlamydia; and the utilization of the "I Know" in-home test kit for Chlamydia and gonorrhea.

- *Partnership to Eliminate Disparities in Infant Mortality, Action Learning Collaborative*: DPH participates in the Action Learning Collaborative, administered through DPH Maternal and Child Health. This program addresses the high rates of infant mortality in SPAs 1 and 6 via three interventions; dissemination quarterly briefs, identification of relevant health education material and conducting workshops, and designing and developing a website regarding infant mortality.

- *AV Best Babies Collaborative*: SPA 1 staff participate in the AV Best Babies collaborative to promote healthy births in the AV.

- *Best Start Program*: SPA 1 staff participate in the Best Start program from First Five LA to improve child health in the cities of Palmdale and Lancaster.

- *Youth Engagement Project*: This project is an AV gang reduction program which aims to reduce gang activity and encourage and empower youth.

B. DHS actions being taken and planned to address community health care needs

The large geographic area, coupled with the continuing demographic changes occurring in the AV (i.e. the rapid increase in population size, etc.) presents significant challenges in meeting the health care needs of this community. In order to address this need, DHS provides health care through a delivery system that includes a network of directly-operated health care facilities as well as Community Partner clinics. These clinics include the High Desert Health System Multiservice Ambulatory Care Center (HDHS MACC) in west Lancaster, the South Valley Health Center in east Palmdale, the Antelope Valley Health Center in east Lancaster, the Lake Los Angeles Community Clinic in Lake Los Angeles, and the Littlerock Community Clinic in Littlerock.

The Community Partner program is designed to improve access to care by contracting with community clinics to provide outpatient care for uninsured residents. Community Partner clinics include the AIDS Healthcare Foundation in central Lancaster, the Antelope Valley Community Clinic with sites in central Lancaster and central Palmdale, Tarzana Treatment Center with clinics in central Lancaster and west Palmdale, and the Catalyst Foundation for AIDS Awareness and Care in central Lancaster.

These needs are being addressed through the following actions:

1. Actions taken to improve the structure and approach to providing outpatient services in the AV region:

   - *Partnering with LA Care Health Plan*: Over the past 12 months, DHS has phased out operation of the County-operated Community Health Plan (CHP) and partnered with LA Care as a member of that health plan's provider network. Over 17,500 LA Care health plan members are currently enrolled at DHS sites in the AV.

   - *Expansion of the Healthy Way LA (HWLA) Program*: The HWLA program, operating under a Medicaid waiver, is designed to provide a bridge from now until the implementation of health care reform for uninsured patients by providing health care coverage through an organized program with specifically defined health care benefits. Approximately 8,700 uninsured residents have been enrolled in the HWLA program at DHS sites in the AV and 1,037 have been enrolled at Community Partner sites.

   - *System-Wide Ambulatory Care Initiatives*: Through system-wide initiatives, DHS is currently in the process of implementing patient-centered medical homes at all DHS primary care sites in the AV. Assigning patients to medical homes will improve continuity of care, afford better access to primary care, and enhance overall care coordination and management. Other DHS system-wide initiatives which will benefit services provided in the AV region include specialty care

decompression, implementation of the i2i Registry, and the empanelment of patients through assignment to specific primary care providers.

2. Actions taken to enhance services at DHS facilities in the AV:

   - *Retinal Screening and Laser Eye Clinic*: The clinic offers telemedicine technology to screen patients for diabetic retinopathy as well as the treatment of retinopathy.

   - *Growth of Disease Management Programs*: There has been significant increase in the Asthma and Diabetes Disease Management Programs. These intensive enrollment-based programs are designed to equip patients with the resources and skills needed to better self-manage these chronic health conditions.

   - *Anticoagulation Clinic*: Planning is currently underway at the HDHS MACC to establish an Anticoagulation clinic. This nurse-practitioner-run clinic will improve the monitoring and management of patients receiving anticoagulation therapy for vascular conditions.

3. DHS is actively investing in the health care infrastructure in the AV through the following current and planned projects:

   - *South Valley Health Center Pediatric Clinic*: Through funding partially provided through a grant from the LA Care Health Plan, HDHS will open a Pediatric Clinic at the South Valley Health Center in August, 2012. This will enable the relocation of two pediatricians and make space available for the expansion of adult primary care. DHS is evaluating the addition of a medical home team in the Center.

   - *MACC Replacement Project*: The HDHS MACC, currently located in the fifty-year-old former High Desert Hospital building, is being replaced with a new state-of-the-art ambulatory care center located in Central Lancaster approximately six miles from the current site. The project is currently under construction, with expected completion in the spring of 2014. The project will increase the number of exam rooms from 42 at the current site to 62 at the new facility. DHS is currently evaluating opportunities to enhance programs and expand access through the new facility project.

4. DHS has taken the following steps to increase capacity and improve access to care in the AV through the Community Partner program:

   - *Increase in Community Partner Sites and Funding*: The number of Community Partner clinics in the AV has increased from four sites in fiscal year (FY) 2008-09 and FY 2009-10; to five sites in FY 2010-11; to eight sites in FY 2011-12. Total Community Partner funding committed to the AV has increased from $ 733,168 in FY 2008-09 to a maximum of $5,706,645 in FY 2011-12.

   - *Infrastructure Funding for Community Partners*: In FY 2009-10, DHS provided $ 408,890 in one-time infrastructure funding to assist two Community Partners in expanding capacity at two sites.

- *Support for FQHCs*: One DHS Community Partner, Antelope Valley Community Clinic, now operates the first Federally Qualified Health Center (FQHC) in the AV. A second Community Partner, the Catalyst Foundation, has also formed an FQHC.

C. *DMH actions being taken and planned to address community health care needs in the AV*

DMH recognizes the longstanding challenges in meeting the health and mental health needs of residents in the AV. Suicide rates are higher (14 per 100,000) in the AV than the county average (8 per 100,000),[8] as is child abuse reporting, elder abuse reporting, and psychiatric emergencies. Resources in this community are primarily located in Lancaster and Palmdale, making service access more challenging for those in more remote rural areas. The demand for all services continues to increase, and limited public transportation, especially in remote areas, further compromises access to resources.

Despite these challenges, according to the 'Vulnerable Community in Los Angeles County' report,[9] published as a part of Prevention and Early Intervention in 2008, the AV had one of the highest rates for mental health access seen across the county, indicating that treatment services may be reaching the mentally ill population to a greater degree in the AV compared to other parts of the county.

The following strategies are being used by DMH to integrate and coordinate health, mental health and other community-based services to promote and improve health outcomes in this region:

1. Healthy Way LA (HWLA): Integration of mental health services into primary care for HWLA beneficiaries will increase access and improve service coordination.

   - Co-locate mental health staff at the High Desert MACC to improve access to mental health services through early intervention and treatment
   - Enrollment of eligible mental health consumers into HWLA
   - Provide information, education and consultation to primary care staff
   - Establish a contract with a Community Partner agency serving the Antelope Valley, enhancing the provision of integrated primary care and behavioral health services.
   - Link mental health consumers with medical homes as part of the HWLA program

2. Antelope Valley Partners for Health (AVPH): DMH is a member of AVPH which provides information, education, consultation, linkage and referral to mental health services to assist with improving health outcomes. The AV has long relied upon community partnerships to address the health and mental health needs of residents, and AVPH is the most proactive of these partnerships. DMH is working with AVPH on the following activities:

   - Healthy Homes: In-home nursing and support services for high risk families with children ages 0-5.
   - United We Mentor: Mentors to high risk children and youth that provide positive role models and opportunities for improved educational success and healthy lifestyles.

- Healthy People Initiatives: Initiatives to improve health and quality of life. The current focus is the issue of obesity - a problem which impacts many of the other health related concerns.
- Best Babies Collaborative: Outreach, support, and referrals to improve birth outcomes for high-risk pregnant women.

3. Outpatient Mental Health: AV and Palmdale Mental Health Centers provide an array of outpatient mental health services, including:

   - Outpatient mental health
   - Psychiatric services
   - Case Management to link to community resources, including primary health
   - Streamlined referral process for parents at risk of losing their children to DCFS
   - Field capable services in home and/or co-located with community partners (Acton Rehabilitation Center, Tarzana Treatment Center, etc.)
   - Navigation services to assist in removing obstacles to care
   - In-home treatment and referral for homebound older adults

4. AV Wellness & Enrichment Center: Offers peer inspired activities to promote wellness and recovery, including the following health related activities:

   - Women's Inspiration – (health and self-care)
   - Mind over Matter – (incorporates health)
   - Healthy Living
   - Wellness, Recovery Action Plan (WRAP)
   - Referrals to community resources including substance abuse and primary health

5. School Integration Project: This is a unique collaboration with education, mental health and primary health in the Keppel School District in Littlerock-an un-served school in an underserved community provides:

   - On-site mental health services
   - On-site medical services through AV Community Clinic's Care-A-Van

6. Suicide Prevention: Since 2010, 160 people, including clinicians, community residents, and para-professionals in Lancaster, Palmdale, and Acton have received training on how to reduce the high suicide rate in the AV. This training includes the following models: Suicide Education and Training, Training for Clinicians, Applied Suicide Intervention Skills Training (ASIST), and Question, Persuade and Refer (QPR). In addition, a suicide debriefing was provided at the Acton Library.

7. Future Plans:

   - Additional Suicide Prevention trainings using QPR and ASIST models will be offered
   - Participate as a partner to AVPH Healthy People initiative to address obesity and mental health issues related to obesity

VI. Conclusion

In recent years, the AV has undergone significant demographic changes, including a rapid increase in population size and the high socioeconomic burden. The largely rural nature of this sparsely populated and geographically isolated region creates unique challenges in addressing the health and health care needs of this community. As is described in this report, the AV has higher rates of mortality compared to the rest of LAC for some of the leading causes of death; however, based on new 2010 Census data, these disparities are likely smaller than previously reported. The contributors to higher mortality in this region include high rates of disease risk factors such as cigarette smoking and obesity, and high socioeconomic burden.

In order to continue to effectively meet the health care needs of this region, DPH, DHS, and DMH are actively conducting and planning for multiple approaches to improve the health, mental health, and access to care challenges faced by this growing community. These approaches include: a) developing and tailoring specific community-based programs to address the most pressing health issues faced by the AV community, which include high rates of obesity and tobacco use, high rates of motor vehicle accidents, high suicide rates, and challenges in accessing health and mental health services; b) investing in improving and expanding the health care infrastructure to meet the growing needs; c) assisting in coordinating care and services; and d) actively establishing community partnerships to leverage resources and expand reach.

If you have any questions, or would like additional information, please let me know.

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PH:1205:012

Attachments

c: Chief Executive Officer
County Counsel
Executive Officer, Board of Supervisors
Director of Health Services
Director of Mental Health

V. REFERENCES

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Ten leading causes of death and premature death

Los Angeles County

57,620 total deaths
455,513 years of life lost*

Leading causes of death

Rank	Cause of death	No. of deaths	Death rate+
1.	Coronary heart disease	12,725	129
2.	Stroke	3,301	34
3.	Lung cancer	2,958	31
4.	Emphysema/COPD	2,904	30
5.	Alzheimer's disease	2,125	21
6.	Pneumonia/influenza	2,097	21
7.	Diabetes	1,964	20
8.	Colorectal cancer	1,388	14
9.	Liver disease	1,246	12
10.	Breast cancer	1,173	12

Leading causes of premature** death

Rank	Cause of death	Years of life lost*	Death rank
1.	Coronary heart disease	59,440	1.
2.	Homicide	31,270	16.
3.	Motor vehicle crash	22,017	19.
4.	Liver disease	21,515	9.
5.	Suicide	20,835	14.
6.	Drug overdose	20,484	18.
7.	Lung cancer	17,295	3.
8.	Stroke	15,554	2.
9.	Diabetes	14,697	7.
10.	Breast cancer	13,466	10.

Antelope Valley Service Planning Area

2,230 total deaths
21,576 years of life lost*

Leading causes of death

Rank	Cause of death	No. of deaths	Death rate+
1.	Coronary heart disease	476	183
2.	Emphysema/COPD	202	79
3.	Lung cancer	118	43
4.	Diabetes	113	41
5.	Stroke	94	37
6.	Alzheimer's disease	72	31
7.	Pneumonia/influenza	59	23
8.	Liver disease	53	17
9.	Colorectal cancer	52	20
10.	Motor vehicle crash	45	13

Leading causes of premature** death

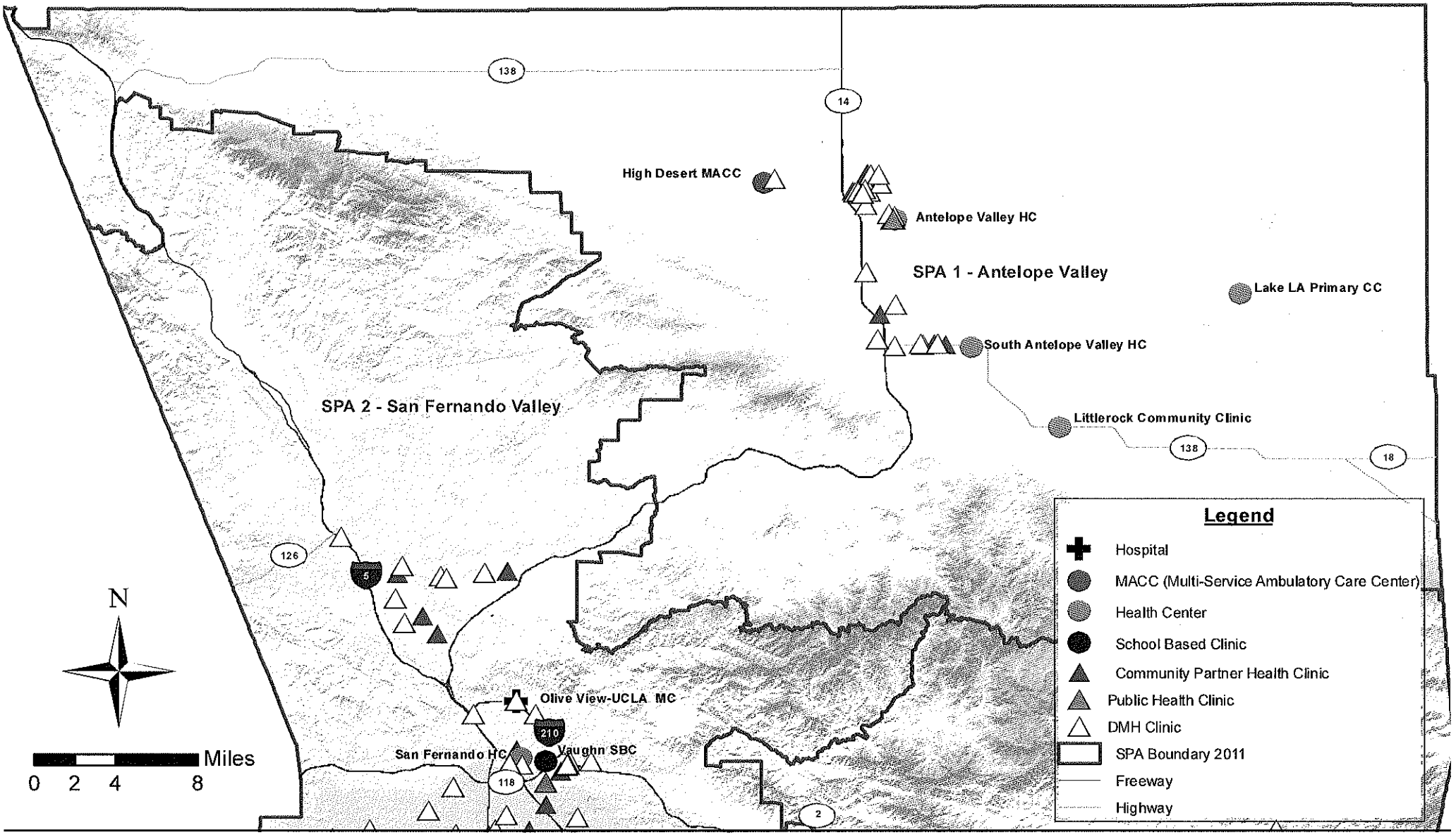
Rank	Cause of death	Years of life lost*	Death rank
1.	Coronary heart disease	2,821	1.
2.	Motor vehicle crash	1,522	10.
3.	Homicide	1,236	15.
4.	Diabetes	1,101	4.
5.	Liver disease	963	8.
6.	Emphysema/COPD	911	2.
7.	Lung cancer	908	3.
8.	Suicide	858	16.
9.	Drug overdose	836	17.
10.	Pneumonia/influenza	480	7.

+Age-adjusted death rate per 100,000.
*Excludes infants less than 1 year of age and persons of unknown age.
**Death before age 75 years.

Health Services
LOS ANGELES COUNTY

Los Angeles County
Department of Health Services

DHS, Public Health, Mental Health, and Community Partners Facilities



LAC DHS Office of Planning and Analytics